I've read, with interest, the FCC's proposed rules that would eliminate the telegraphy requirement for the Amateur Extra amateur radio service. The proposed rules, as I understand them, would also take HF privileges away from current Technician-Plus-Telegraphy license holders.

Advocates of the proposed rules argue that current Technician-Plus-Telegraphy licensees will "easily" upgrade to General. I agree. Most holders of that license will find it easy to upgrade. Furthermore, I believe that the proposed license structure will encourage some Technicians to earn code-free General class licenses. These are all good things.

However, these rule changes will hurt certain constituencies. It's obvious that hard-core telegraphy operators will not be happy with the change and I expect that constituency to argue eloquently against the proposed rules. There is, however, another constituency who will be harmed by the new rules. I believe that our ability to recruit children into the amateur radio service will be harmed by the proposed rules.

The proposed rules eliminate telegraphy, the license requirement that children find easiest to learn. At the same time the proposed rules increase the difficulty level of the requirements that are, for children, most difficult. In my teaching experience I've found that eleven-year olds learn telegraphy quickly and easily. At the same time, most children find the current Technician test to be a very difficult obstacle. Requiring the General for HF access, will put the most useful Amateur Radio privileges out-of-reach for all but a few children. I've found that children need on-the-air time to gain the experiences that allow them to understand General-level questions in a practical context.

I have also found that, HF access and telegraphy skills are critical to the formation of *young* amateur radio operators. In my Amateur Radio club's Junior High School training program, children build their own transmitters. The parts for their little 5 watt 7 MHz transmitters cost less than $20. Our children also purchase and build direct conversion receivers for under $30. The total cost of the materials to construct a 7MHz dipole or vertical is less than $10. We have found that our $60 station is within the fiscal means of a people whose primary income sources are lawn mowing and newspaper delivery.

HF telegraphy radios are cheap! They are also great teaching tools. Children can understand a power supply, oscillator and amplifier. Our little radios open the door to understanding the basics of wireless communications. They also give children access one of the most exciting aspects of our hobby. When a sixth-grader contacts someone from far away on a radio he or she has built; that's magic!

Technicians' VHF/UHF privileges are of little value children. The equipment required to take advantage of VHF/UHF privileges can't be easily built and understood by children. Even though such kits are available (Ten-Tec), their cost is prohibitive for the paper-route set. Children who do earn a Technician license (without code) often buy low power commercial hand-held transceivers that cost around $90. These radios are not great teaching tools.

Rather, they're black boxes that allow the kids limited local repeater access. In our little North Dakota community, that isn't very exciting and it has been known to, "get old real quick." More importantly, the experiences associated with VHF/UHF hand-held operation won't help a child "easily" pass the General exam. When the ARRL and FCC made the Technician class THE entry level license they helped adults and hurt children. The proposed rule changes exacerbate the problem.

The best option, from a teaching standpoint, would be a new Novice license. The Novice license should *require* telegraphy and a written element that emphasized ohms law, basic components, simple block designs, antenna basics, and a small rule set. (No eleven year old really needs to know who can apply for a 1x1 special event call sign or whose permission is needed for shipboard operation.) A hard deadline for upgrading to Technician or General should also be in place. I believe that if Novice licensees have 12 months to upgrade before losing their CW HF privileges they will be motivated to keep their privileges. In a perfect world, the Novice license should be a true learner's permit, primarily designed for the education of children.

I realize that the old Novice license lost its popularity when the ARRL pushed the Technician as an entry-level license and emphasized bringing new adults into our hobby. The ARRL and the FCC must share the blame for jointly developing a license structure that discouraged and mislead beginners (especially children).

Amateurs at the national and local level are now making an effort to redress this situation and bring more youth into our hobby. The ARRL's "Big Project" focuses on supporting in-school instruction and local clubs are increasing efforts to teach wireless technology to children. Many amateurs now believe that our failure to get children excited about understanding the science and mathematics associated with wireless technology has degraded our nation's ability to sustain a high level of scientific innovation.

I'm 57 years old. I earned my Novice license when I was 14 and met many of my oldest childhood friends while on-the-air. All of those friends have gone on to do great technological things. One is a broadcast engineer, two are senior electrical engineers for major corporations, one manages an international satellite network, and another is the Chief Operating Officer of one of the nation's largest broadcast networks. Their individual success is certainly associated with the educational function of the Novice license. In 1963 we easily passed our Novice exams. Knowing that we had one year to upgrade, we pushed ourselves and each other to learn the adult skills associated with the General. Nobody had to pay for our self and mutual instruction and the nation clearly benefited.

The FCC should help to reemphasize Amateur Radio's educational function. Many amateurs are now dedicating time and money to help renew Amateur Radio's value as an instructional tool. In the past eight months members of my small local Amateur Radio club have dedicated over 300 hours and more than $4,000 to our club's Junior High School Amateur Radio

program. Although we are proud of our efforts and our new "hams," we know that ours is not an isolated effort. Clubs all over the US are beginning to reemphasize our hobby's educational purpose. It is enormously discouraging to see the FCC propose rules that will make a license structure worse.

I hope that the final rules will include a learner's license that requires telegraphy skill and invites children into our hobby. The current license structure isn't good, but it is serviceable. The proposed rules will, I believe, be a serious handicap to our effort to reemphasize Amateur Radio's educational function among children.